

**PISTON AND ROD ASSEMBLY FOR AIR-ACTUATED
VARIABLE DAMPING**

Abstract of the Disclosure

A damper includes a piston that carries a relatively compact control valve for controlling fluid flow through the piston. The control valve provides a variable amount of damping by regulating damper fluid flow between the extension chamber and the compression chamber of the damper during extension and compression strokes. Pressure regulation across the piston is controlled through a flow path as determined by the control valve. The damping force of the damper varies depending upon the loading conditions of the vehicle. The control valve is air pressure actuated to adjust the damping force and control the flow of fluid in the flow path. The piston and rod assembly include unique features such as a seal plate design, and spring retainer that aid in the efficient and reliable assembly in a commercial production setting.